

number of less than 9 and comprising at least 45% by weight of aliphatic saturates. Iodine values are determined according to ASTM D-460.

Mineral oils have been developed which provide improved oxidation properties. These mineral oils are generally referred to as Group II and Group III basestocks. These basestocks were developed for passenger car lubricants. These basestocks cost less than polyalphaolefins. The Group II basestocks are generally worse in oxidation and low temperature performance than Group III basestocks. Group II and III basestocks have a high level of saturation. However, Applicants have discovered that oxidation and low temperature performance are affected by the type of saturated components in the oil. Group II stocks generally have a higher proportion of cyclic saturated components than aliphatic saturated components.

The mineral oils of the claims have an aliphatic saturates content of at least about 45% by weight. The saturates level are determined by mass spectrometer. The aliphatic saturates are often referred to as paraffinic saturates. Cyclic saturates are generally referred to as cycloparaffinic saturates and compose the balance of the saturates in the mineral oils.

Claims 1-27 stand rejected under 35 U.S.C. section 103 as being obvious over US Patent 6,034,040, issued in the name of Ozbalik et al. The rejection states that

Ozbalik et al ["Ozbalik"] disclose lubricating oil compositions useful as manual transmission and axle lubricants which comprise a mineral oil having a) a Viscosity Index (VI) of greater than 110 and an aniline point of greater than 110°C and b) a linear and single ring paraffin content (saturates) of greater than 68%.

The rejection states that Ozbalik et al teach functional additives.

Ozbalik et al teach lubricating oil compositions having excellent thermal and oxidative stability, wear control, copper corrosion control and compatibility with seal materials

comprising a mineral oil having a) a Viscosity Index of greater than 110 and an aniline point of greater than 110° C. and/or b) a linear+single ring paraffin content of greater than 68 wt %, and at least one polymer selected from olefin (co) polymer(s), polyalkyl (meth) acrylate(s) and mixtures thereof. The lubricating oil compositions are particularly useful as manual transmission and axle lubricants.

Ozbalik et al describes the saturates in the mineral oil as follows:

In another embodiment, the mineral oil (A) of the present invention is a hydrotreated, hydrocracked and/or iso-dewaxed mineral oil having a linear+single ring (i.e., noncondensed cycloparaffin) paraffin content of 68 wt % or greater, as determined by the analytical technique set forth in the paper by C. J. Robinson entitled Low-Resolution Mass Spectrometric Determination of Aromatics and Saturates in Petroleum Fraction (Analytical Chemistry, Vol. 43, No. 11, September 1971, pp. 1425-1434). This mass spectrometric procedure is useful for determining up to 25 saturated and aromatic compound types in petroleum fractions.

Ozbalik et al fails to teach or suggest the aliphatic saturates content of the mineral oil. Although Ozbalik et al teach the saturates content of the mineral oil, Ozbalik et al fail to teach or suggest any benefits to the type of saturate present. Applicant has discovered that mineral oils having a higher proportion of aliphatic saturates have better oxidation properties and low temperature properties.

Since Ozbalik et al do not teach or suggest the aliphatic saturate contents, Applicant submits that the claims are not rendered obvious. Applicants requests withdrawal of the rejection and allowance of the claims. In the event any issues remain in the prosecution of this application, Applicants request the Examiner call the undersigned attorney to expedite allowance of the claims. If any fees are required for the filing of these papers, Applicants request the Commissioner to charge those fees to Deposit Account #18-0988.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

By William C. Tritt

William C. Tritt
Reg. No. 32,510

1621 Euclid Avenue
Nineteenth Floor
Cleveland, Ohio 44115
(216) 621-1113